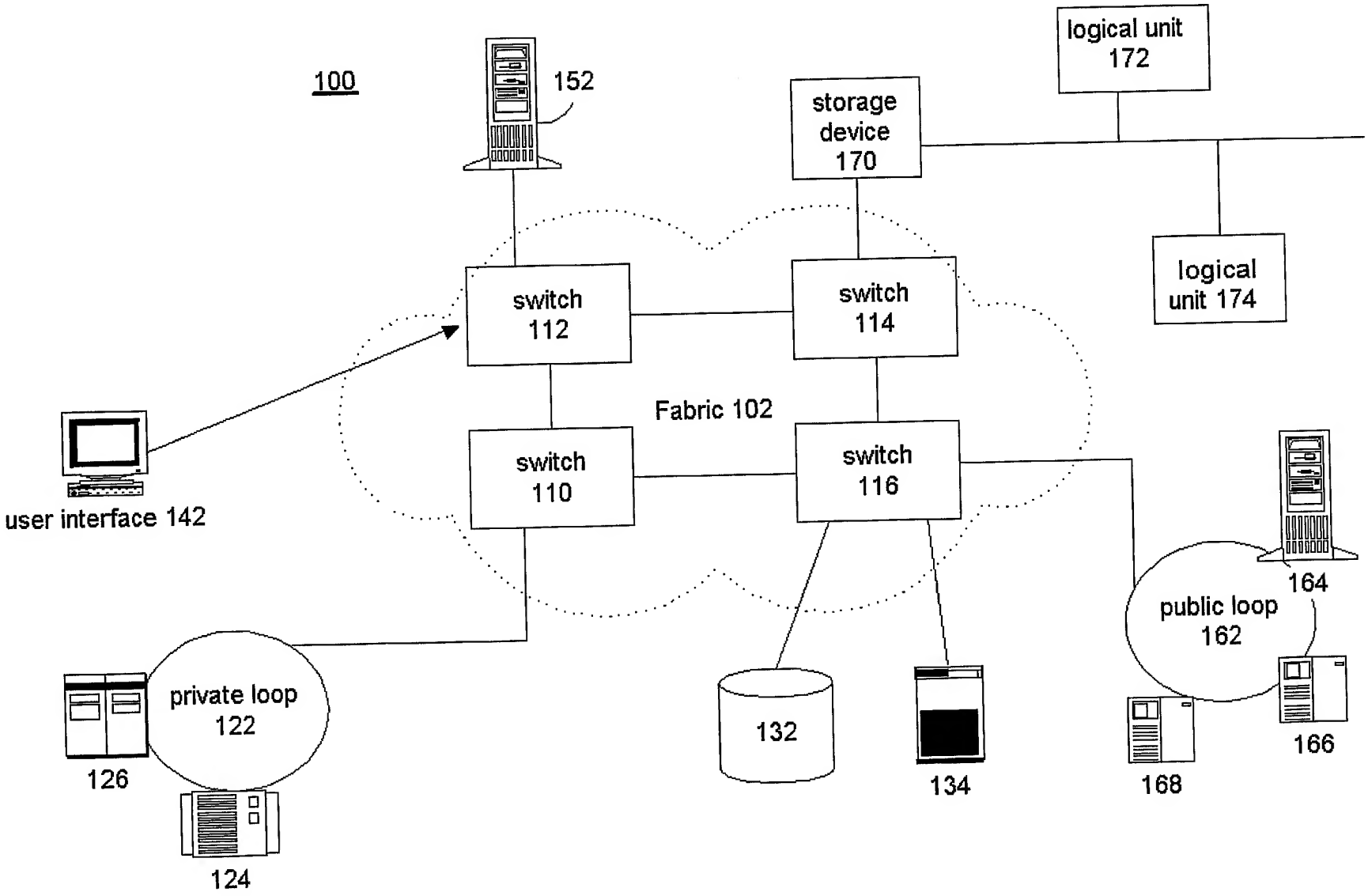

100
152
logical unit
172
storage
device
170
logical
unit 174
switch
112
switch
114
Fabric 102
switch
110
switch
116
user interface 142
164
public loop
162
private loop
122
126
124
132
134
166
168

FIG. 1

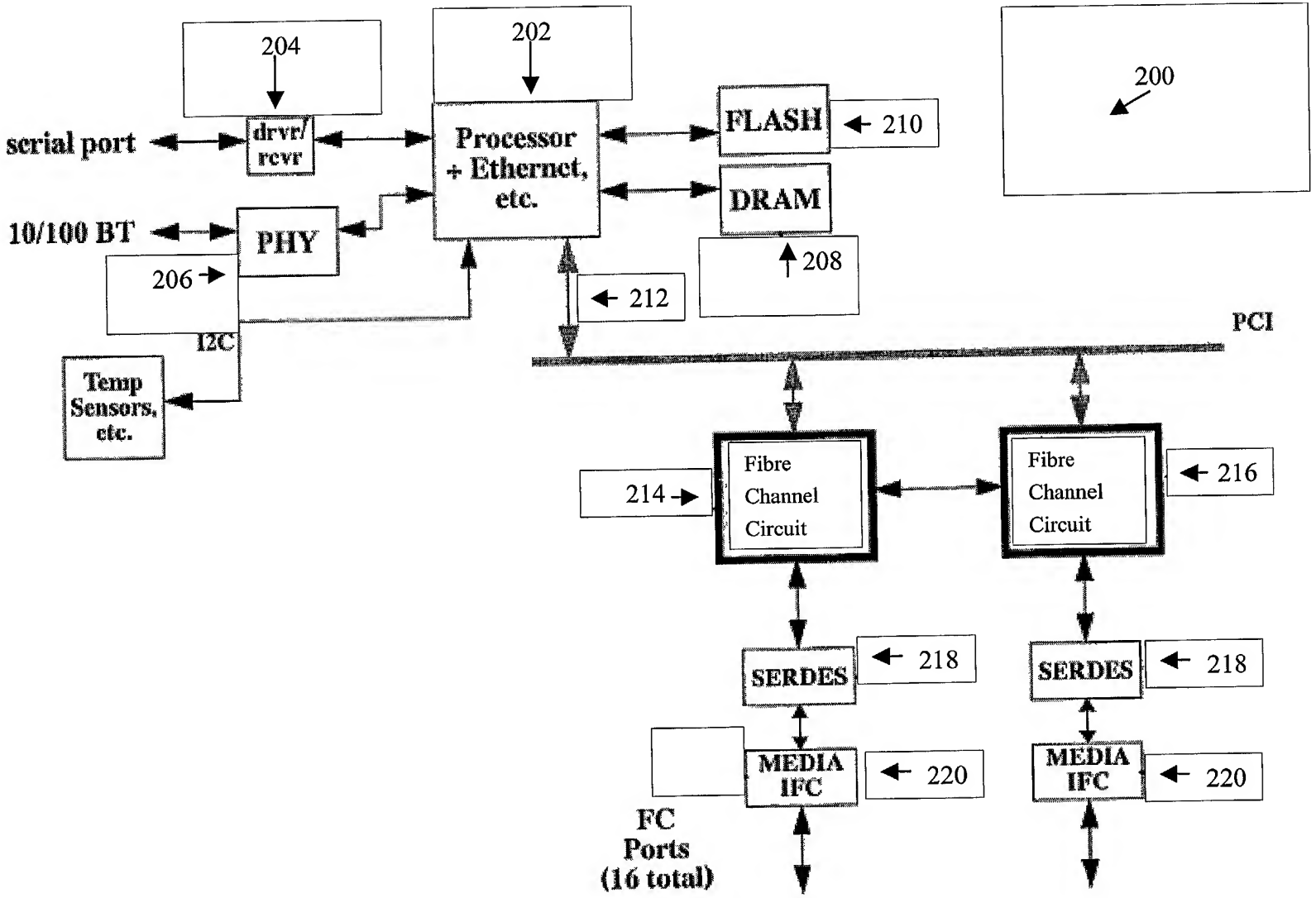

204
202
200
serial port
drvr/
rcvr
Processor
+ Ethernet,
etc.
FLASH
210
DRAM
208
10/100 BT
PHY
206
212
I2C
Temp
Sensors,
etc.
PCI
214
Fibre
Channel
Circuit
Fibre
Channel
Circuit
216
SERDES
218
SERDES
218
MEDIA
IFC
220
MEDIA
IFC
220
FC
Ports
(16 total)

Figure 2

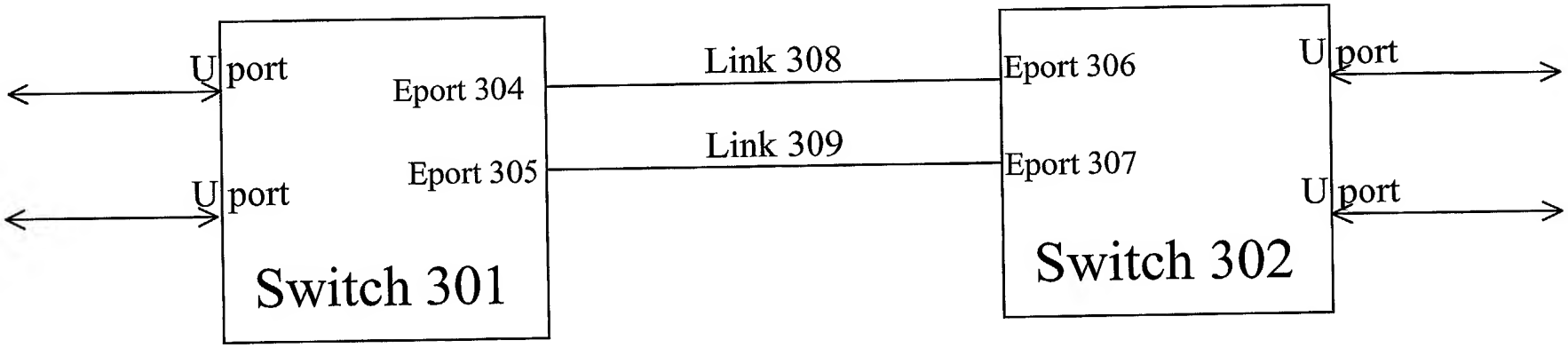

U port
U port
Eport 304
Eport 305
Switch 301
Link 308
Link 309
Eport 306
Eport 307
Switch 302
U port
U port

Figure 3

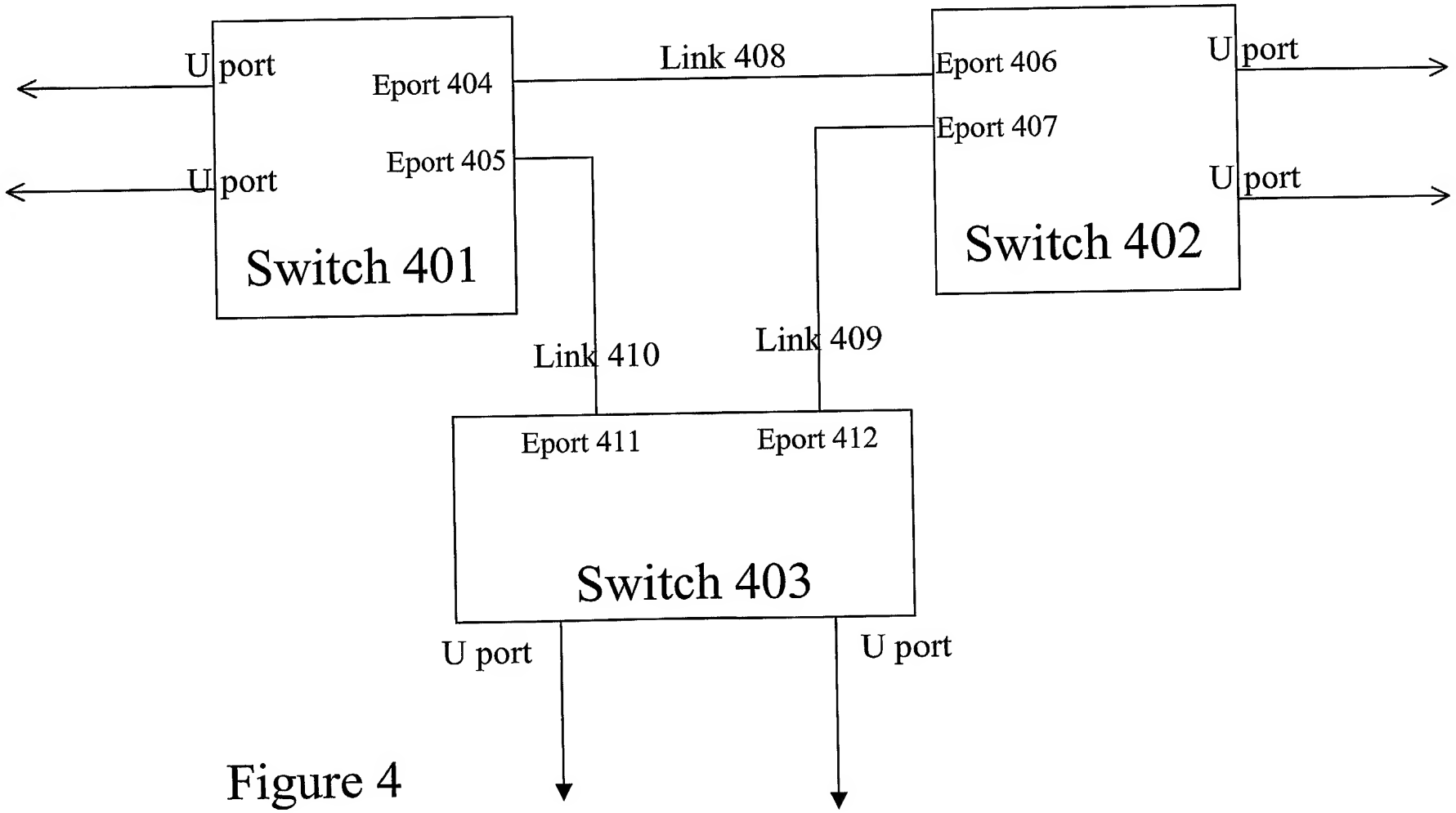

U port
Eport 404
Link 408
Eport 406
U port
U port
Eport 405
Eport 407
U port
Switch 401
Switch 402
Link 410
Link 409
Eport 411
Eport 412
Switch 403
U port
U port

Figure 4

Figure 5a

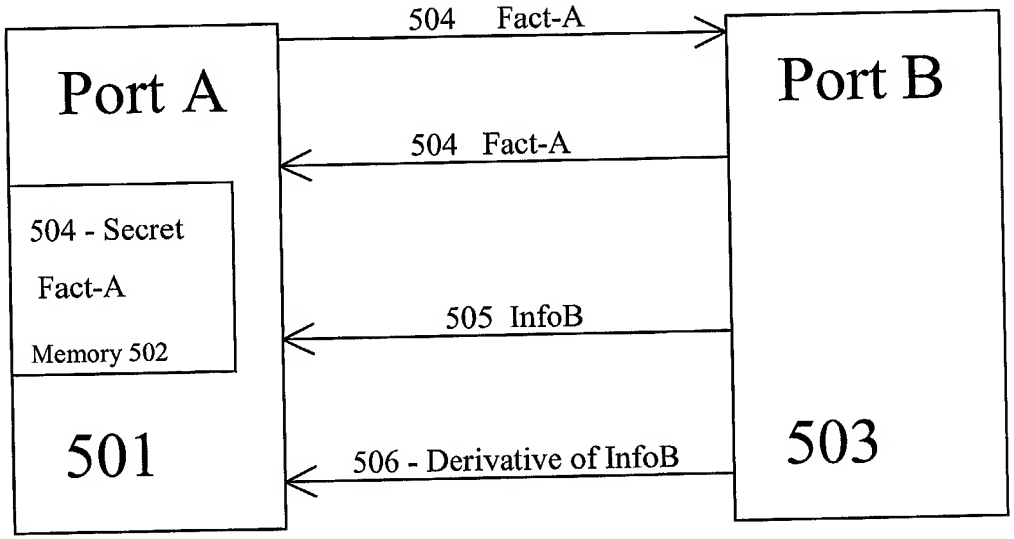
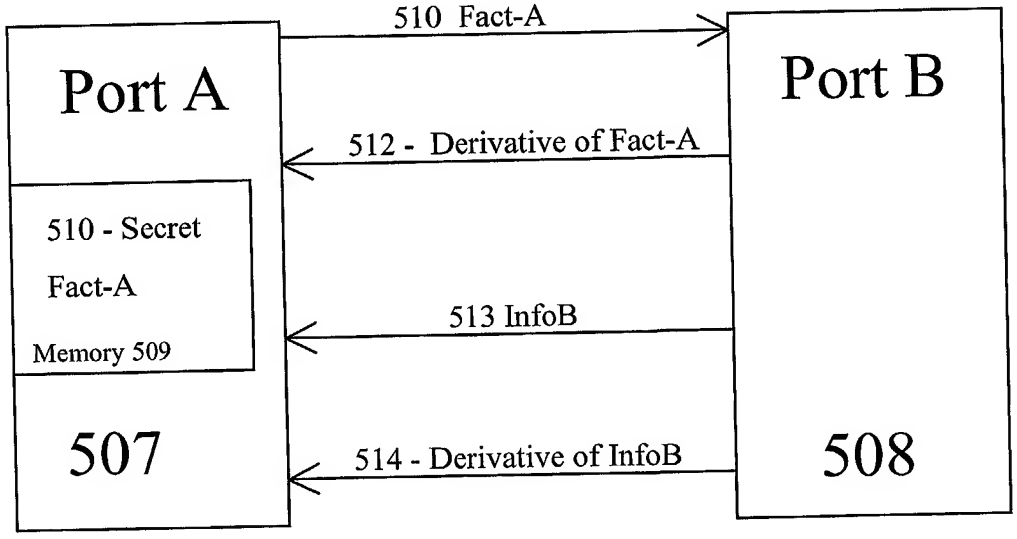


Figure 5b



20TETO" 9Z6T90DT

Figure 5c

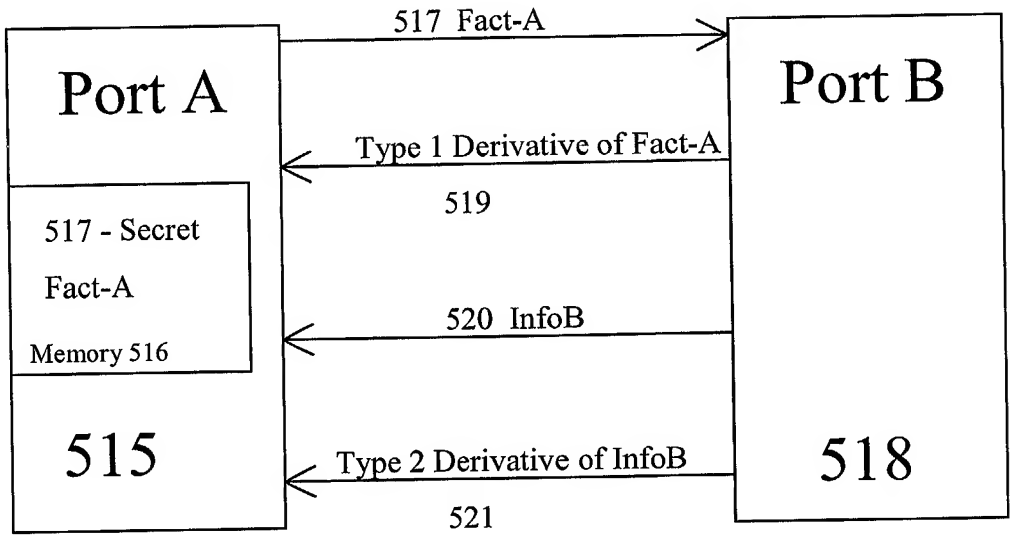
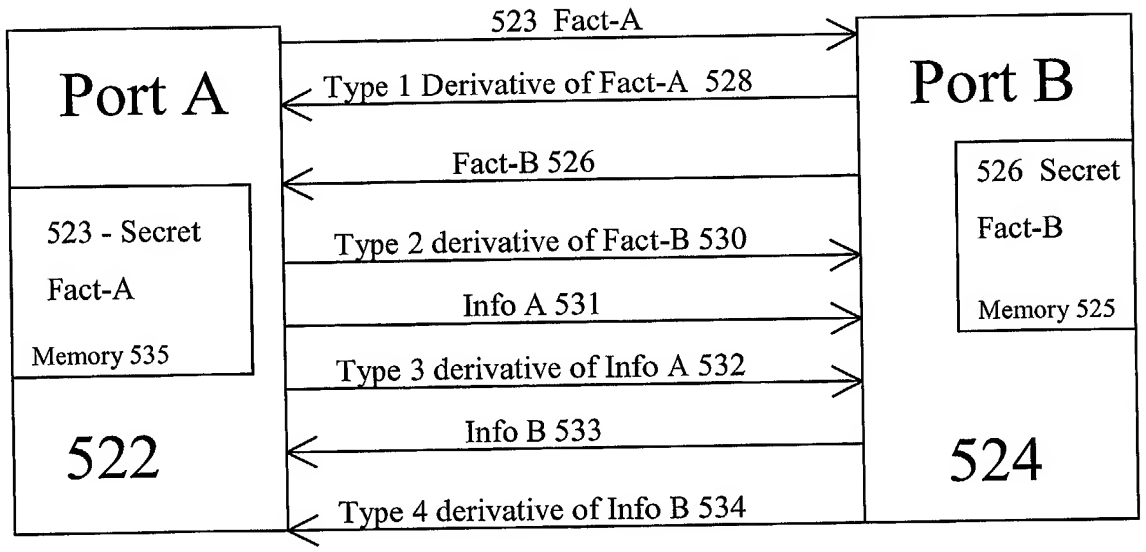


Figure 5d



Step #	Name / Function	Payload
1	Request Authentication	Secret Fact A
2	Acknowledge Request	Secret Fact B; Type 1 derivative of Secret Fact A; InfoB; Type 3-4 derivative of Info B
3	Confirm Authentication	Type 2 derivative of Secret Fact B; InfoA; Type 3-4 derivateve of InfoA

Figure 6

Step #	Name / Function	Payload
1	Request Authentication	Secret Fact A; InfoA; Type 3-4 derivateve of InfoA
2	Acknowledge Request	Secret Fact B; Type 1 derivative of Secret Fact A; InfoB; Type 3-4 derivative of Info B
3	Confirm Authentication	Type 2 derivative of Secret Fact B

Figure 7

Step #	Name / Function	Payload
1	Acknowledge Request	Secret Fact B; Type 1 derivative of Substitute Secret Fact A; InfoB; Type 3-4 derivative of Info B
2	Confirm Authentication	Type 2 derivative of Secret Fact B; InfoA; Type 3-4 derivateve of InfoA

Figure 8

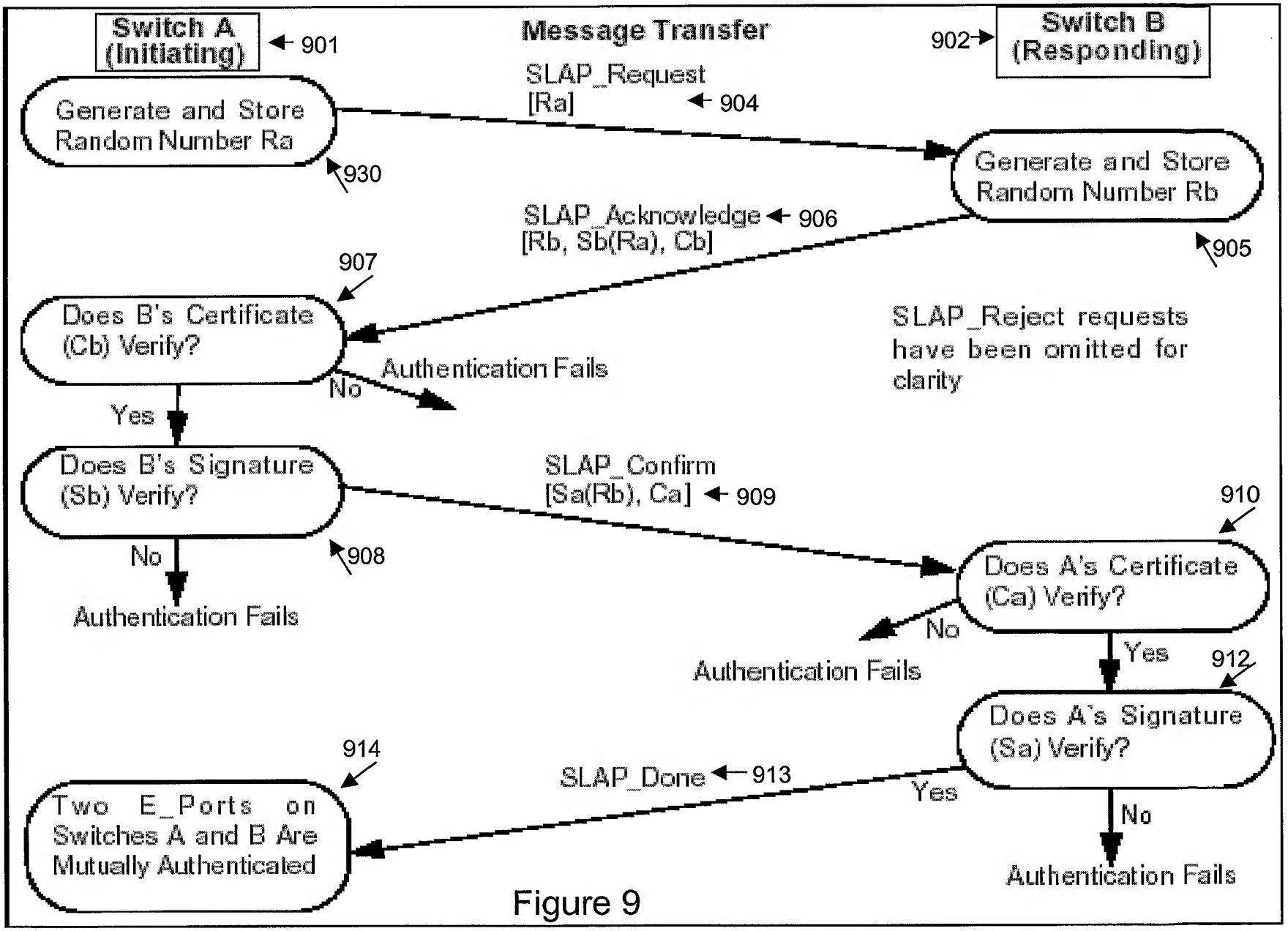

Switch A (Initiating)
901
Message Transfer
902
Switch B (Responding)
Generate and Store Random Number Ra
930
SLAP_Request [Ra]
904
Generate and Store Random Number Rb
905
SLAP_Acknowledge [Rb, Sb(Ra), Cb]
906
907
Does B's Certificate (Cb) Verify?
No
Authentication Fails
Yes
SLAP_Reject requests have been omitted for clarity
Does B's Signature (Sb) Verify?
908
No
Authentication Fails
SLAP_Confirm [Sa(Rb), Ca]
909
910
Does A's Certificate (Ca) Verify?
No
Authentication Fails
Yes
912
Does A's Signature (Sa) Verify?
Yes
No
Authentication Fails
914
SLAP_Done
913
Two E_Ports on Switches A and B Are Mutually Authenticated

Figure 9

20TE10 9Z6T90DT

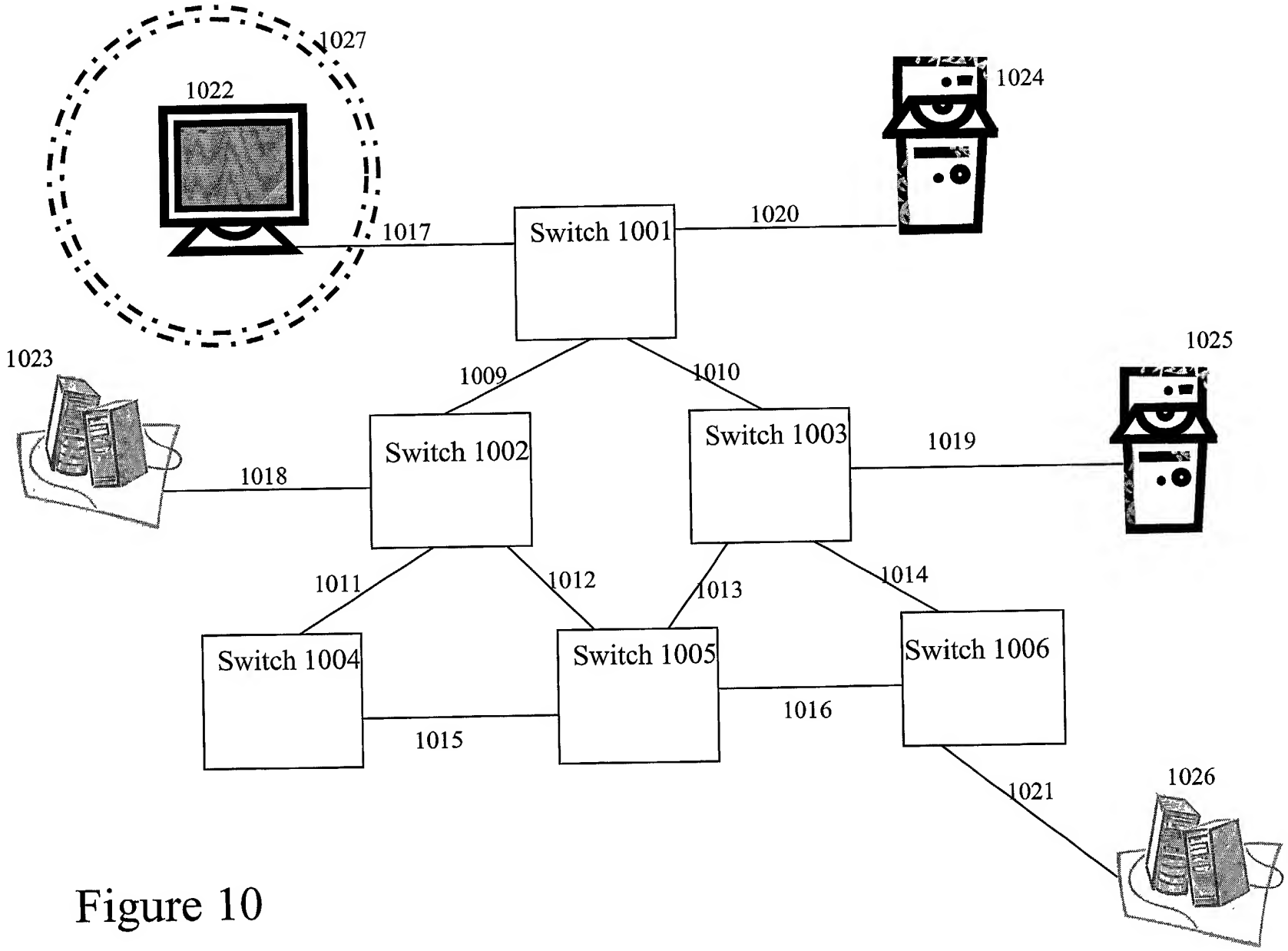


Figure 10

20TETO" 9Z6T900T

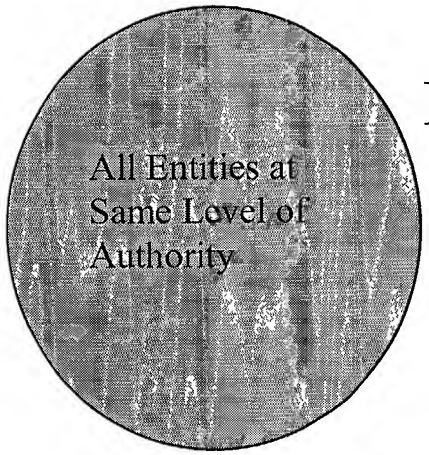


Figure 11a

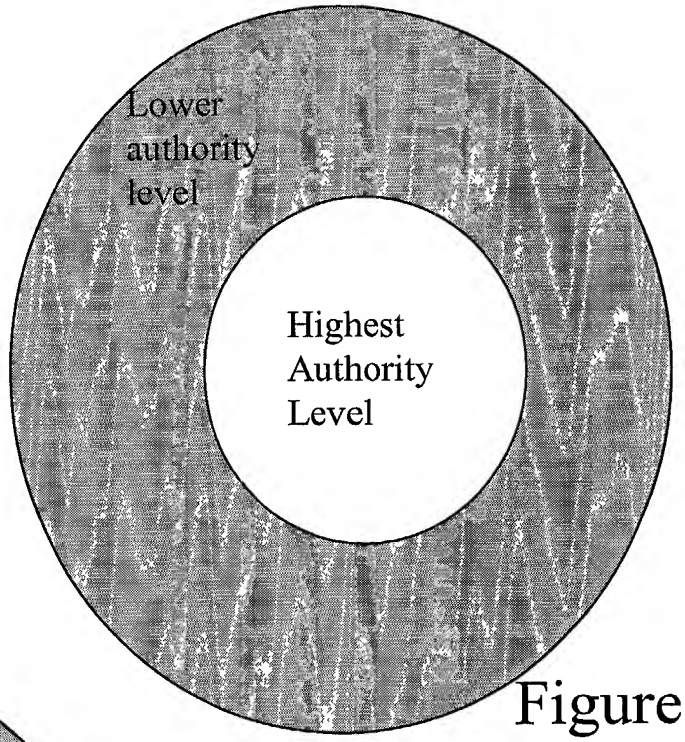


Figure 11b

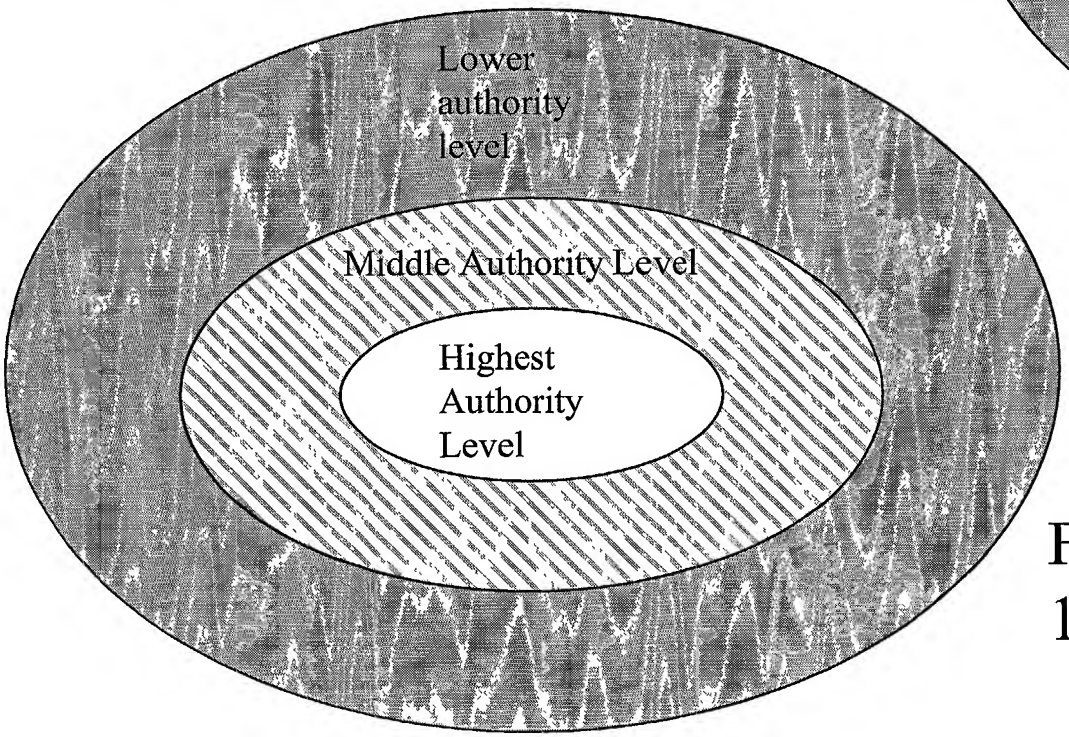


Figure 11c

20TETO"9Z6T90DT

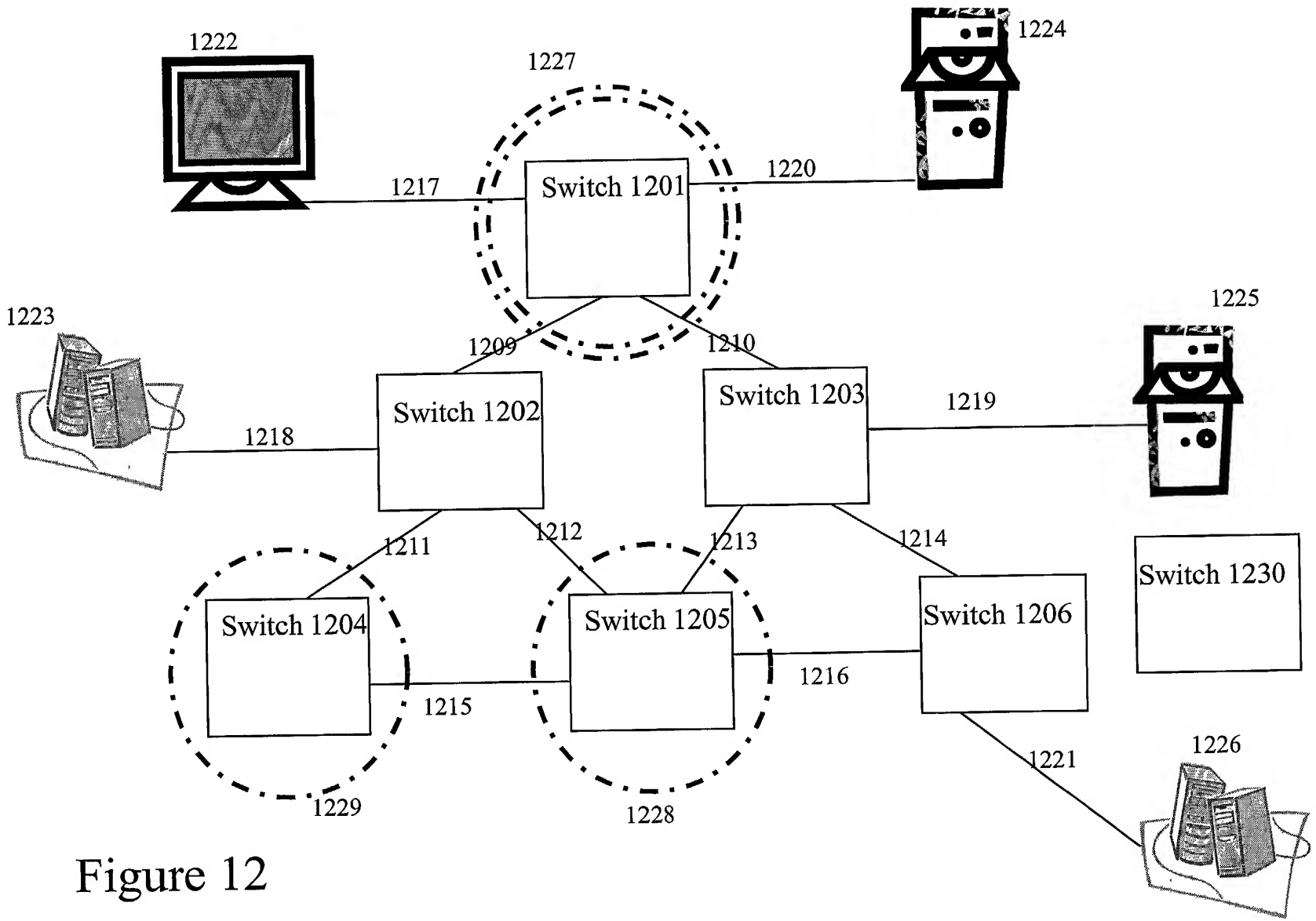


Figure 12

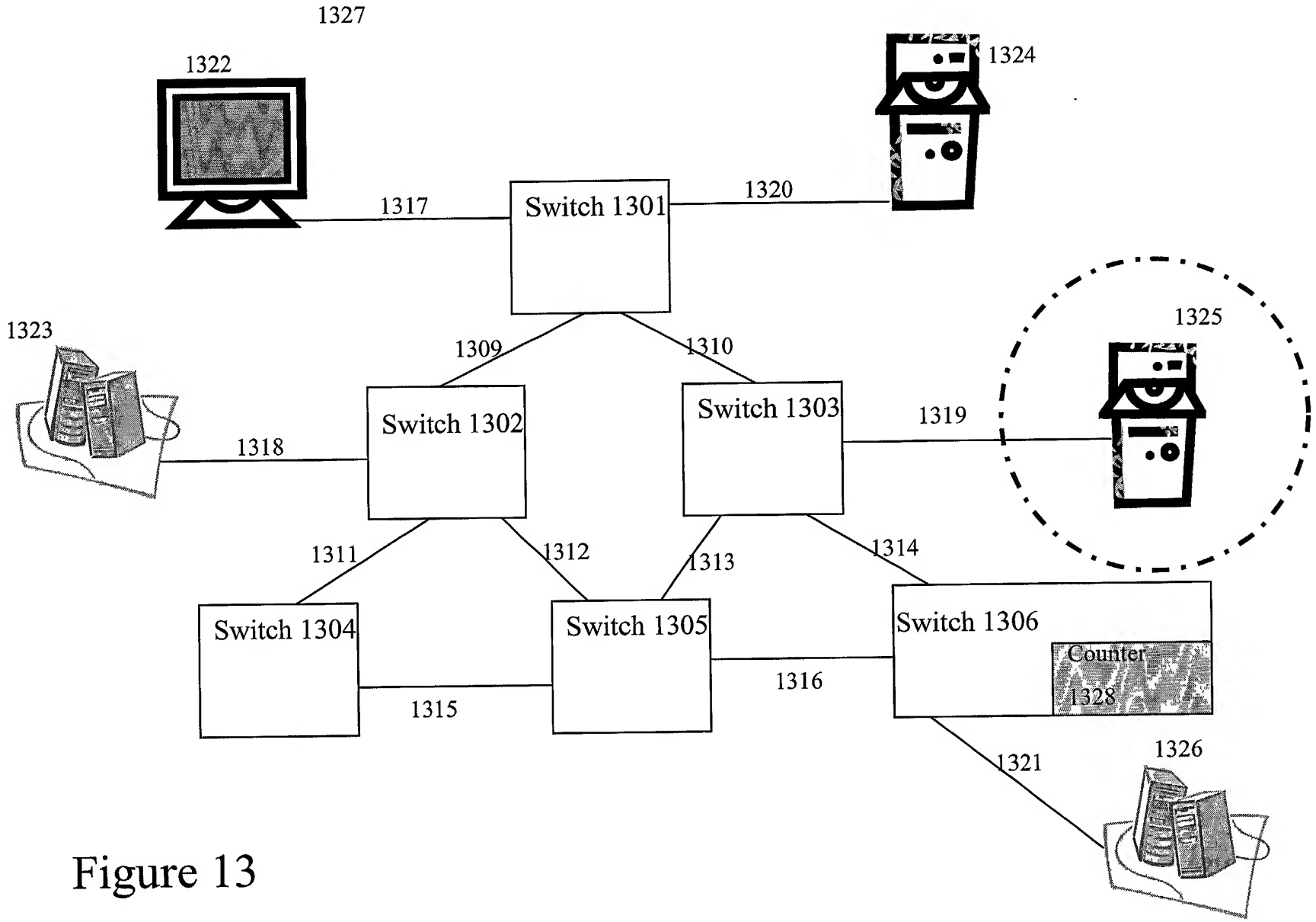

1327
1322
1324
1317
Switch 1301
1320
1323
1325
1309
1310
1318
Switch 1302
Switch 1303
1319
1311
1312
1313
1314
Switch 1304
Switch 1305
Switch 1306
Counter
1328
1316
1315
1321
1326

Figure 13

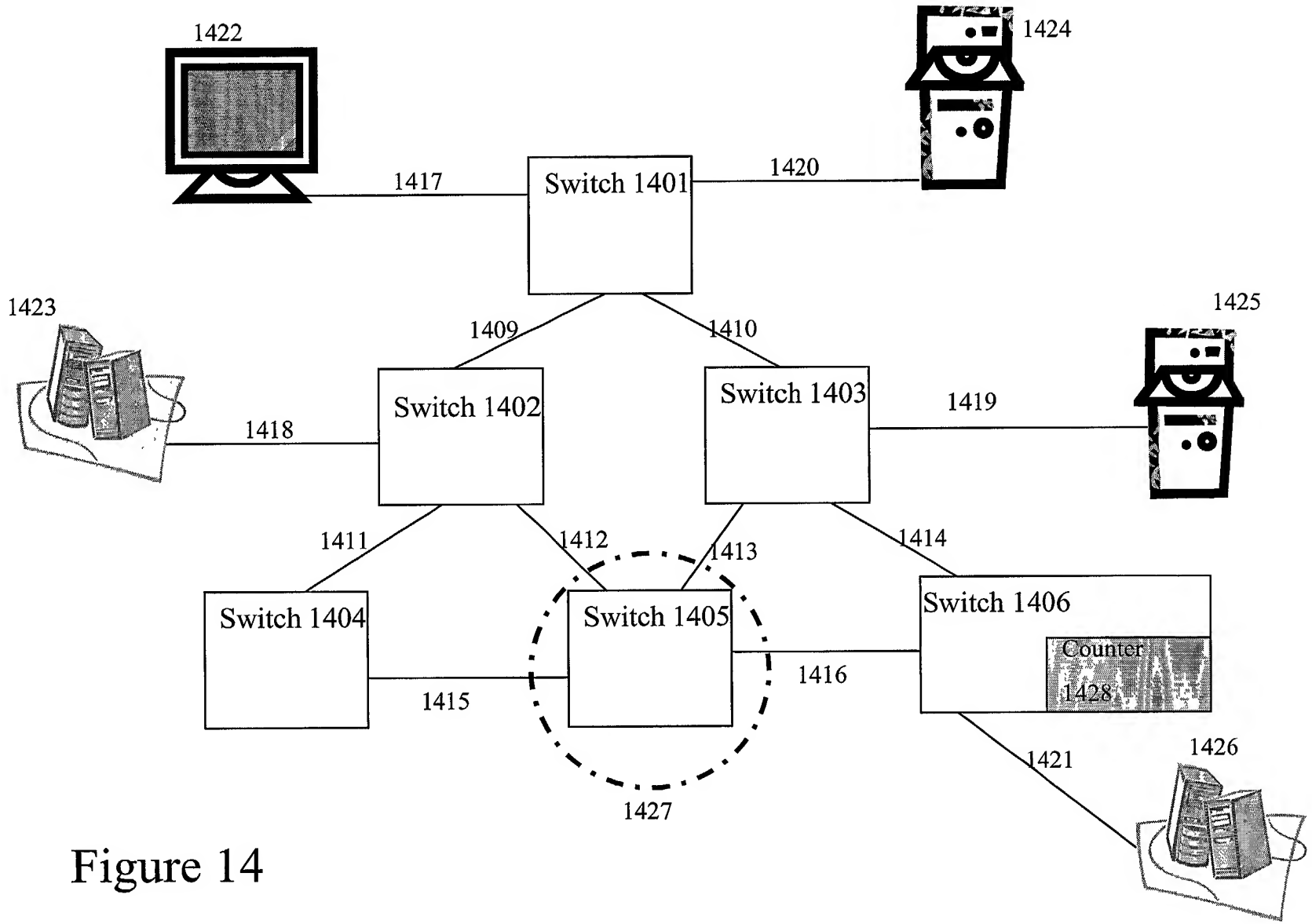

1422
1424
1417
Switch 1401
1420
1423
1425
1409
1410
Switch 1402
Switch 1403
1418
1419
1411
1412
1413
1414
Switch 1404
Switch 1405
Switch 1406
Counter
1428
1416
1415
1421
1426
1427

Figure 14

20TETO" 9Z6T900T

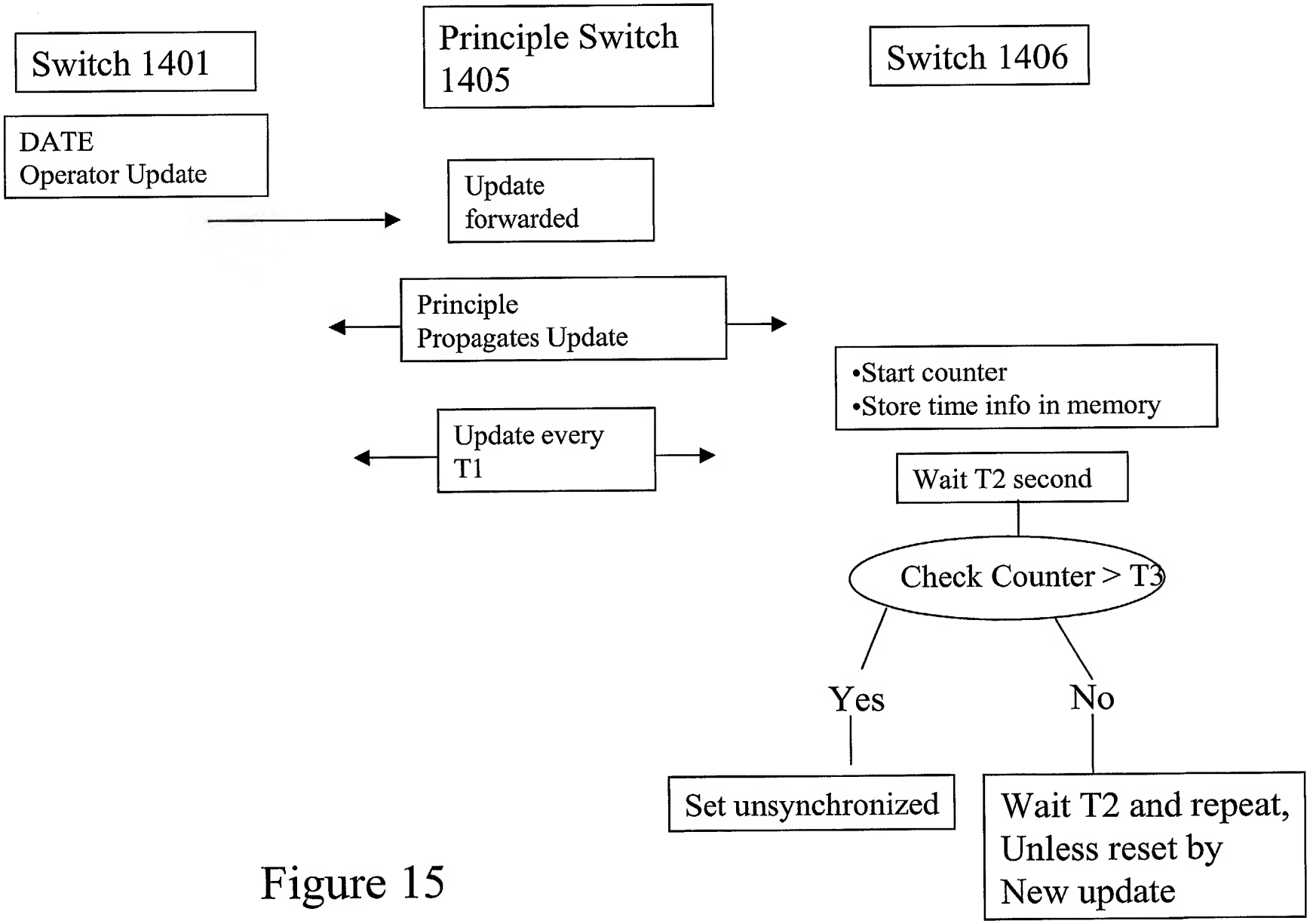


Figure 15

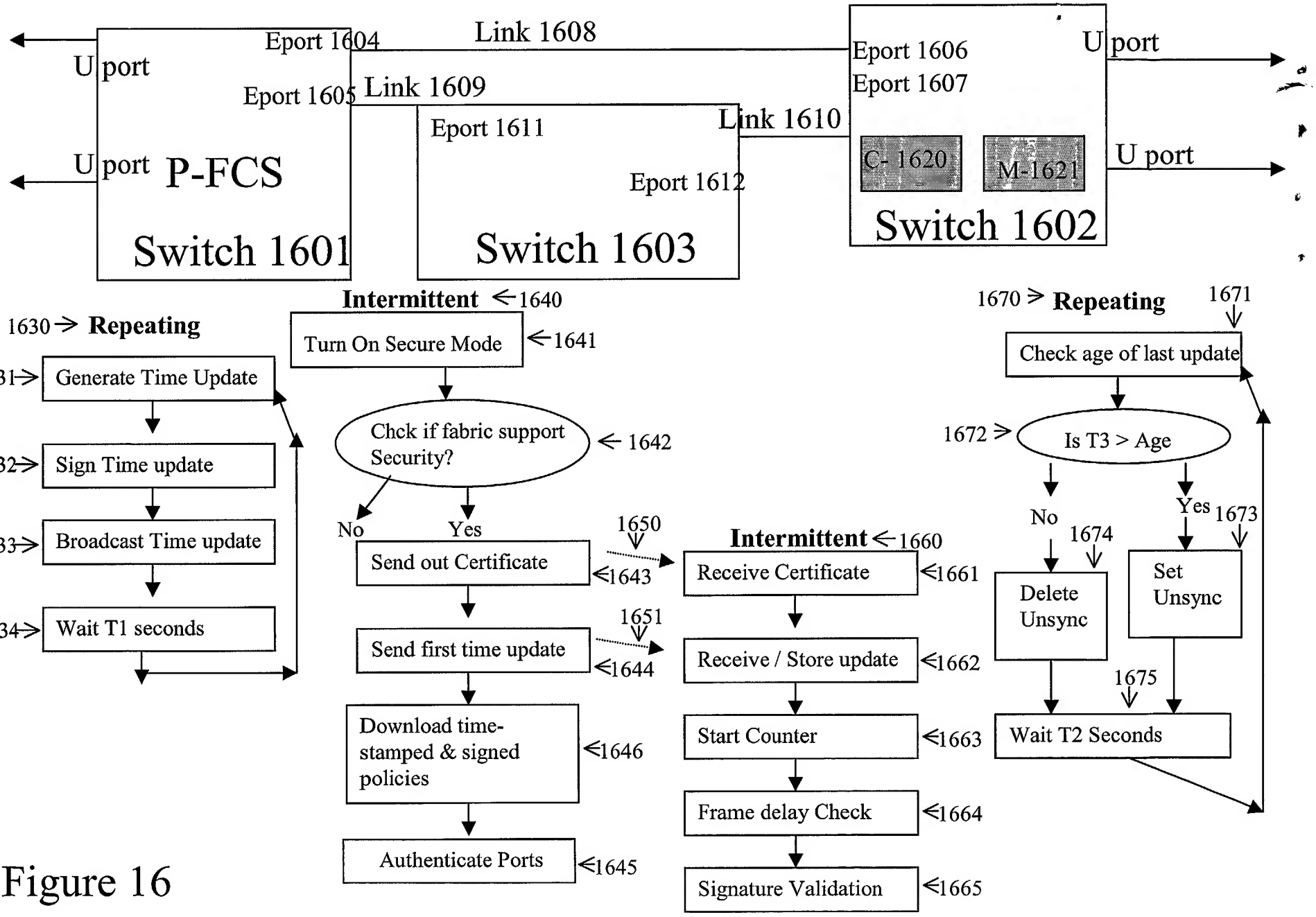

U port
Eport 1604
Link 1608
Eport 1606
Eport 1607
U port
Eport 1605
Link 1609
Link 1610
Eport 1611
U port
P-FCS
Eport 1612
C- 1620
M-1621
U port
Switch 1601
Switch 1603
Switch 1602
1630 Repeating
Intermittent 1640
1670 Repeating
1671
1631 Generate Time Update
Turn On Secure Mode
1641
Check age of last update
1632 Sign Time update
Chck if fabric support Security?
1642
1672 Is T3 > Age
1633 Broadcast Time update
No
Yes
1650
Intermittent 1660
No
1674
Yes
1673
1634 Wait T1 seconds
Send out Certificate
1643
Receive Certificate
1661
Delete Unsync
Set Unsync
1651
Send first time update
1644
Receive / Store update
1662
1675
Download time-stamped & signed policies
1646
Start Counter
1663
Wait T2 Seconds
Authenticate Ports
1645
Frame delay Check
1664
Signature Validation
1665

Figure 16